

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP03/02945

A. CLASSIFICATION OF SUBJECT MATTER

Int.Cl⁷ B23K26/38, B28D5/00, H01L21/301

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl⁷ B23K26/38, B28D5/00, H01L21/301

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Jitsuyo Shinan Koho 1922-1996 Jitsuyo Shinan Toroku Koho 1996-2003

Kokai Jitsuyo Shinan Koho 1971-2003 Toroku Jitsuyo Shinan Koho 1994-2003

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	JP 4-111800 A (Nippon Sekiei Glass Co., Ltd.), 13 April, 1992 (13.04.92), Page 2, upper right column, line 16 to lower right column, line 7; Fig. 1 (Family: none)	1-10
A	JP 10-305420 A (Nippon Glass Co., Ltd.), 17 November, 1998 (17.11.98), Claims; detailed explanation of the invention; Par. Nos. [0021] to [0024]; Figs. 1, 3 (Family: none)	1-10

☒ Further documents are listed in the continuation of Box C.☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not
considered to be of particular relevance"E" earlier document but published on or after the international filing
date"L" document which may throw doubts on priority claim(s) or which is
cited to establish the publication date of another citation or other
special reason (as specified)"O" document referring to an oral disclosure, use, exhibition or other
means"P" document published prior to the international filing date but later
than the priority date claimed"T" later document published after the international filing date or
priority date and not in conflict with the application but cited to
understand the principle or theory underlying the invention"X" document of particular relevance; the claimed invention cannot be
considered novel or cannot be considered to involve an inventive
step when the document is taken alone"Y" document of particular relevance; the claimed invention cannot be
considered to involve an inventive step when the document is
combined with one or more other such documents, such
combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search
13 June, 2003 (13.06.03)Date of mailing of the international search report
01 July, 2003 (01.07.03)Name and mailing address of the ISA/
Japanese Patent Office

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5211805 A (Rangaswamy, SRINIVASAN), 18 May, 1993 (18.05.93), Column 1, lines 6 to 10, 42 to 45; column 4, lines 60 to 68; column 8, line 59 to column 9, line 2; Figs. 1 to 4 & JP 6-198475 A	1-10
A	Katsuyoshi MIDORIKAWA, "Femto-byo Laser no Genjo to Kako Oyo", Dai 45 Kai Laser Netsukako Kenkyukai Ronbunshu, 1998 December, ISBN 4-947684-21-6, 3.4 Local Machining by Nonlinear Effect, 5.4 Modifying Transparent Material	1-10
E, A	WO 02/22301 A1 (Hamamatsu Photonics Kabushiki Kaisha), 21 March, 2002 (21.03.02), Full text; all drawings (Family: none)	1-10
A	Tomokazu SANO et al., "Pico-byo Pulse Laser ni yoru Silicon no Kako Tokusei Hyoka - Tan-Pulse- Tanhacho Laser ni yoru Denshi Zairyo no Seimitsu Bisai Kako (Dai 1 ho)-", Japan Welding Society Zenkoku Taikai Koen Gaiyo, 13 March, 2000 (13.03. 00), 66th series, pages 72 to 73	1-10
A	Kiyotaka MIURA, Kazuyuki HIRAO, "Femto-byo Laser Shosha ni yoru Glass Naibu eno Hikari Yuki Kozo Keisei", Dai 42 Kai Laser Netsukako Kenkyukai Ronbunshu, 1997 November, ISBN:4-947684-15-1, page 107, line 4 to page 109, line 5	1-10
A	Ken'ichi HAYASHI, "Kotai Laser Kochoha ni yoru Glass Kiban no Naibu Marking", Dai 45 Kai Laser Netsukako Kenkyukai Ronbunshu, 1998 October, ISBN:4-947684-21-6	1-10